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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/892,466	06/28/2001	Ryoko Kitano	Q65163	3305
7590	03/04/2004		EXAMINER	
SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC 2100 Pennsylvania Avenue, N.W. Washington, DC 20037-3213			HARAN, JOHN T	
			ART UNIT	PAPER NUMBER
			1733	

DATE MAILED: 03/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	09/892,466	KITANO ET AL.
	<b>Examiner</b>	<b>Art Unit</b>
	John T. Haran	1733

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 06 February 2004.
- 2a) This action is **FINAL**.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 3-10 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) 8 and 9 is/are allowed.
- 6) Claim(s) 3-7 and 10 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 28 June 2001 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 12/11/03.
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The information disclosure statement (IDS) submitted on 12/11/03 has been considered by the examiner. It is noted that EP 0855703 A2 was struck through since it was previously cited in the 892 form mailed with the action dated 1/15/03.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 5-7 and 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 5 and 6, the phrases "so as to magnify a contact portion from the center side to the outside" and "in such a manner that a contact portion may be magnified from the center side to the outside" renders the claims indefinite because the wording is confusing. It appears Applicant is trying to claim that the pressing body initially contacts the center and then spreads to the periphery thereby enlarging the contact portion. It is suggested to amend the claim language to say - - so as to enlarge a contact portion from the center to the periphery - - and - - in such a manner that a contact portion may be enlarged from the center to the periphery - -.

Regarding claim 7, it is unclear what the limitation "thereby magnifying pressure of the high-pressured atmosphere" requires of the claim. Is Applicant trying to specify the second holding step occurs in the high-pressured atmosphere? It appears this is

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the case and that the additional hold down pressure magnifies or increases the overall pressure. If so the claim should be amended to positively claim that the second holding step occurs in the high-pressured atmosphere in order to clarify and avoid confusion.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 3 and 5 are rejected under 35 U.S.C. 102 (a), (b), and (e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Nakamura et al (US 6,004,420).

It is noted that if the foreign priority of the present application was perfected by providing a certified English translation the Nakamura reference would no longer be available under 102(b) but would still be available under 102 (a) and (e).

Nakamura et al teach a method of producing optical disks by bonding two disk substrates to each other through an adhesive sheet.

As to independent claim 3, the method of Nakamura et al comprises the steps of temporarily bonding an adhesive sheet to a first disk substrate, putting a second disk substrate on the exposed adhesive sheet and pressing the second disk substrate against the exposed adhesive sheet by elastic material to thereby stick the second disk substrate to the temporarily bonded article to form a stuck article and thereafter the stuck article is indexed 45 degrees to a station for keeping the stuck article under a pressure or heat and pressure atmosphere to bond the first and second disk substrates together. Nakamura et al suggest in exemplary fashion using an autoclave with high pressure atmosphere of 10 kg/cm<sup>2</sup> (approximately 10 atm) (Col. Col. 5, line 9 – Col. 6, line 37; Col. 6, line 57 – Col. 7, line 20). It would naturally flow that the pressing force

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provided by the elastic material when sticking the second disk substrate to the temporarily bonded article to form a stuck article would be less than the pressure exerted by high pressure atmosphere maintained in the autoclave at which the stuck article is kept during bonding in the autoclave as the pressure required to stick the second disk substrate onto the exposed adhesive to form a stuck article, not a bonded article, would need to be less than the bonding pressure disclosed so as to ensure premature bonding doesn't occur so that air bubbles can be removed. Nakamura anticipates claim 3.

In the alternative, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide a pressing force, which is less than 10 kg/cm<sup>2</sup> (approximately 10 atm) to stick the second disk substrate to the temporarily bonded article to form a stuck article in view of Nakamura et al suggesting said second disk is stuck to the temporarily bonded article as opposed to bonded, wherein one of ordinary skill in the art would have readily appreciated a pressure less than 10 kg/cm<sup>2</sup> would be required to merely stick the second disk onto the exposed adhesive without bonding and without mixing/generating air bubbles into the adhesive agent.

As to independent claim 5, the rejection against claim 3 is applied, wherein the additional limitation of claim 5 directed towards pressing the second disk substrate against the first disk substrate by means of a pressing body which magnifies a contact portion from the center to the outside is anticipated by Nakamura et al and the elastic pressing body (20) which is shaped like a cone so that the second disk substrate first touches the temporarily bonded assembly from the center portion and sticks

successively toward the periphery of the assembly with the deformation of the elastic (Col 6, lines 7 – 22).

7. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura et al (US 6,004,420) in view of Michimoto et al (EO 0 330 197).

Nakamura is relied upon for the teachings noted above with reference to claim 3.

Nakamura et al teach pressing an adhesive sheet to the first disk substrate to form a temporarily bonded assembly, but Nakamura et al teach to press the adhesive sheet onto the first disk substrate from the center portion to the other portion (i.e. radially) and are silent towards pressing from one end to the other end. However, the pressing method of Nakamura et al is aimed at pressing out air bubbles. As evidenced by Michimoto et al, it is also known to alleviate air entrapped between adhesive sheets and disk substrate, and suggest pressing between rollers from one end portion to the other (Col. 5, lines 19 – 31). Therefore, it would have been an obvious alternative to one of ordinary skill in the art at the time of the invention to press the adhesive sheet of Nakamura et al to the first disk substrate using roller means so as press from one end to the other and only the expect air expelled temporarily bonded assembly would have been formed.

#### ***Allowable Subject Matter***

8. Claims 6, 7, and 10 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

9. Claims 8 and 9 are allowed.

10. The following is an examiner's statement of reasons for allowance:

The prior art of record fails to suggest the claimed methods of laminating first and second disc-shaped substrates in order to form a disc product particularly, holding or pressing the substrates together with the pressing body while subjected to the high pressure atmosphere or performing the pressing and exposing steps at a single one of a plurality of processing locations.

Nakamura et al teach sticking a second disk substrate onto the first disk substrate to form the stuck article (29) at one position (E) and thereafter rotating an index table (7) by about 45° to position (F) to the pressurized atmosphere to perform air bubble removal, therein failing to suggest or otherwise render obvious carrying out both operations at a single one of a plurality of processing locations (claim 8), wherein the elastic pressing body is employed within the high-pressure atmosphere (claims 6 and 7).

11. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Response to Arguments***

12. It is noted that the rejection of claims 7 and 10 as being anticipated by or in the alternative obvious over Nakamura et al has been withdrawn since as noted with in the

indefiniteness rejection of claim 7 above it appears Applicant is attempting to claim that the holding step occurs in the high pressure atmosphere.

Applicant's arguments filed 2/6/04 have been fully considered but they are not persuasive in regards to claims 3-5.

Nakamura teaches creating a stuck, not bonded, article by pressing the two substrates together and then subsequently indexing the stuck article 45 degrees to a station where the stuck article is bonded in an autoclave under a high pressure atmosphere such as 10 kg/cm<sup>2</sup> (approximately 10 atm). Contrary to Applicant's arguments the autoclave is a pressure container that creates an environment of high atmospheric pressure and not simply mechanical pressure and the autoclave eliminates the need in the prior art of maintaining a vacuum throughout the sticking and bonding process. As noted above it either naturally follows or alternatively is obvious that the since that the first pressure forms a stuck article and not a bonded article and the second pressure forms the bonded article that the first pressure level is less than the second pressure level.

### ***Conclusion***

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **John T. Haran** whose telephone number is **(571) 272-1217**. The examiner can normally be reached on M-Th (8 - 5) and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone

number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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